

DOCUMENT RESUME

ED 437 702

CS 510 229

AUTHOR Keyton, Joann; Strawn, Dudley
TITLE Evaluating Communication Competence: A Comparison of Majors and Non-Majors.
PUB DATE 1999-11-00
NOTE 21p.; Paper presented at the Annual Meeting of the National Communication Association (85th, Chicago, IL, November 4-7, 1999).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Communication Research; *Communication Skills; *Communication (Thought Transfer); Comparative Analysis; Higher Education; *Majors (Students); *Nonmajors; *Undergraduate Students
IDENTIFIERS Communication Competencies

ABSTRACT

A study was designed to determine if communication majors had greater communication competency than non-majors. Additionally, for majors, the number of communication courses and types of course, were also examined for their effect on communication competence. Subjects were 200 students at the University of Memphis. The impact of these independent variables on two micro-measures of competence was non-significant for all hypotheses tested. Thus, there was no significant finding revealing discrimination between majors and non-majors, and no significant finding revealing discrimination among majors who had one course, a few, or many. Implications for communication pedagogy and curriculum evaluation are addressed. (Contains 24 references.) (Author/RS)

Evaluating Communication Competence: A Comparison of Majors and Non-Majors

Joann Keyton, Ph.D.

Associate Professor
The University of Memphis
Department of Communication
TCA 143
Memphis, TN 38152-6522

And

Dudley Strawn, M.A.

First Tennessee Bank
Memphis, TN

PERMISSION TO REPRODUCE AND
DISSEMINATE THIS MATERIAL HAS
BEEN GRANTED BY

J. Keyton

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☒ This document has been reproduced as
received from the person or organization
originating it.

☐ Minor changes have been made to
improve reproduction quality.

• Points of view or opinions stated in this
document do not necessarily represent
official OERI position or policy.

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)

1

Correspondence should be directed to the first author:

901-683-5821

fax 901-678-4331

jkeyton@memphis.edu

Abstract: A study was designed to determine if communication majors had greater communication competency than non-majors. Additionally, for majors, the number of communication courses and type of course were also examined for their effect on communication competence. The impact of these independent variables on two micro-measures of competence was non-significant for all hypotheses tested. Thus, there was no significant finding revealing discrimination between majors and non-majors, and no significant finding revealing discrimination among majors who had one course, a few, or many. Implications for communication pedagogy and curriculum evaluation are addressed.

Paper presented at the 1999 convention of the National Communication Association, Chicago. The authors gratefully acknowledge the assistance of students in Professor Keyton's Fall 1998 COMM 3330 Communication Analysis class. The authors also thank Professor Walter G. Kirkpatrick for his support and helpful insight.

Evaluating Communication Competence: A Comparison of Majors and Non-Majors

It seems logical to assume that university students should have greater subject confidence, skill competence, and cognitive knowledge of their respective discipline. This assumption seems reasonable given that speech communication instruction is founded on the assumption that communication skills can be improved (Rubin & Graham, 1988). Given the climate surrounding today's university education, such evaluative benchmarks are expected by university administrators and legislators, as well as students and parents. Administrators and legislators expect disciplinary expertise when advocating for additional funding or when trying to keep a program in spite of budgetary cuts. Thus, educational outcomes are politically motivated (Redmond, 1998). From a consumer orientation, students and parents create another evaluative context for education. Potential students are lured by what they can expect to learn during their studies as well as what they can expect in terms of professional position and pay upon graduation. Parents who feel the pressure of regular tuition increases reinforce this "what am I getting for my money" position. Such a consumer metaphor for education positions classroom instruction as a product (McMillan & Cheney, 1996), a position often rejected by faculty members. Regardless of faculty members' philosophical position on whether or not disciplinary knowledge should be evaluated beyond course assignments, other constituents are demanding that disciplinary evaluation occur.

Why Should Evaluation Occur?

Frequently, employer polls demonstrate the centrality of competent communication to professional success (Wilmington, 1989). Such polls have even been used as arguments for increasing communication course offerings or making selected communication courses required

across the curriculum. It would seem reasonable that some external constituency would require or expect evaluation if the communication-is-central argument is offered. Communication competence has also been documented as essential to students' educational success (Conaway, 1982; Ericson & Gardner, 1992; Hawken, Duran, & Kelly, 1991; McCroskey, Booth-Butterfield, & Payne, 1989; Rubin, Graham, & Mignerey, 1990). Evaluating if and what level of competence is achieved would seem necessary for faculty to effectively design curriculum. Some evaluations, completed as research studies, have documented that students' communication needs are met by communication coursework (Bendtschneider & Trank, 1990). For example, one study found that students' interviewing and presentation skills as well as comfort with communicating increased after a basic communication course (Ford & Wolvin, 1992). If such advantages can be accrued through communication coursework, it would seem reasonable for systematic and programmatic evaluation to first diagnose, and, then, document what has been achieved.

Communication Competence

Frequently, communication educators rely on the concept of communication competence as the primary criterion of such evaluations. Communication competence is a natural selection as it can be defined at micro- or macro-levels and can be assessed at skill/behavioral or conceptual levels. On the surface it has powerful face validity. Most everyone desires communication competence—few people desire to communicate in an incompetent fashion. Moreover, communication competence is central to our discipline in teaching (e.g., students are required to be competent in public speaking), research (e.g., many studies focus on the causes and effects of communication competence), and service (e.g., many consulting and intervention activities attempt to increase communication competence).

Spitzberg and Cupach's (1984) model of communication competence has become a well-known benchmark for identifying and evaluating communication competence. In this model, competence is based upon perceived appropriateness and effectiveness within contextual boundaries. Spitzberg and Cupach argue that to achieve competence interactants must have motivation to communicate, knowledge about communication, skill in communicating, an understanding of how context affects communication, and an awareness of communication outcomes. Thus, their model provides multiple points and platforms for diagnosing and assessing communication competence. Indeed, some programs have identified communication competence as one type of competence students should possess (Aitken & Neer, 1992).

Two micro-level assessments of communication competence are Cegala's interaction involvement and Duran's communicative adaptability. Interaction involvement is the degree to which interactants are engaged, cognitively and behaviorally in conversations with others (Cegala, 1981). In their review of the associated measuring instrument, Rubin, Palmgreen, and Sypher (1994) note that interaction involvement captures information about cognitive and behavioral predispositions of interactants. Duran's (1983) communicative adaptability taps interactants' cognitive and behavioral ability to perceive interpersonal relationships and adapt one's communication accordingly.

Are these constructs adequate and appropriate for identifying communication competence? Both have been used extensively (and with success) to measure the communication intentions of college student populations. Both are identified by Spitzberg and Cupach (1984) as general dispositional measures of communication competence, and both are identified as appropriate oral communication assessment instruments for higher education (Hay, 1996). Finally, both instruments address the relational nature of interaction—how the target interactant

perceives his or her communication in relation to another interactant. Both are generally administered to capture self-perceptions of communication competence. Is this adequate? Yes, if one agrees with McCroskey and McCroskey's (1988) position that "many of the most important decisions people make concerning communication are made on the basis of self-perceived competence rather than actual competence" (p. 110).

Does Communication Coursework Make a Difference?

Communication competence can arguably be innate or learned from various experiences—through the informal practice of interpersonal interaction, vicarious experiences, or formal instruction. Research has documented that competence varies greatly among and within different populations. Because communication majors would likely have greater opportunity to have formal instruction, greater analytical insight about communication, and opportunity for performance feedback in their college coursework, it can be argued that communication students should have greater communication competence than non-majors.

Several studies have tested the effect of communication coursework on students' perceptions of knowledge and skill. For example, Ford and Wolvin (1993) found that students who completed a basic speech course perceived an increase in their communication competence in class, work, and social settings. Rubin, Graham, and Mignerey (1990) have also documented this type of effect. Although their sample size was too small to be conclusive, they found a latent increase (from junior to senior year) in self-perceived communication competence after students took a basic communication skills course early in their college careers.

If, as Ford and Wolvin (1993) found, that communication competence can increase during the course of a one semester, then it is reasonable to assume that a cumulative effect could also be expected. As communication majors take and complete additional communication

coursework, we could expect that levels of communication competence would increase.

Although the increase may not be proportional, the effect of taking additional communication coursework should increase rather than decrease or remain static.

Although the impact of communication courses has been frequently studied, few look for a differential impact on communication majors and non-majors. The typical study (e.g., Ford & Wolvin, 1993) collects data about major status but do not test its effect. Thus, the demographic variable of major is ignored. Other studies of programmatic effectiveness (e.g., Aitken & Neer, 1992) only test majors providing no comparison to non-majors and the potential effect that communication competence increases with instruction and experiences obtained at the college level in any field of study. If communication courses are applauded for their ability to increase communication competency in general, it would be reasonable to expect that this effect separates communication majors from non-majors. Communication majors take more communication coursework than non-majors; thus, the effect of increasing communication competency should be visible.

Research Hypotheses

Given these arguments, the following hypotheses are offered:

H1: Communication adaptability will be higher for communication majors, seniors, and females.

H2: Interaction involvement will be higher for communication majors, seniors, and females.

If the curriculum can be argued to have a cumulative effect on students, this second set of hypotheses will be true for communication majors/minors:

H3: Communication adaptability will be predicted by the number of courses majors have completed.

H4: Interaction involvement will be predicted by the number of communication courses majors have completed.

Methodology

Research Design and Procedure

Using a combination of a survey design and comparisons between experimental and control groups, this study compared levels of communicative adaptability, interaction involvement, and math apprehension between communication major/minors and non-majors. Research participants were recruited from most undergraduate communication courses at The University of Memphis. Students were encouraged by the offer of meeting their academic enrichment credit to participate in a research session that was convenient to them over a period of two weeks. A suitable number of major/minors and non-majors were available through this recruitment process as the department's oral communication course, a university-wide required course, was one of the courses tapped for potential participants.

When the students arrived at the research location, one of the authors passed out and read the statement of agreement to participate. The researcher (sometimes with the help of a student research assistant) administered the questionnaire, which also captured demographic information and the three dependent variables. After all participants completed this part of the study, the subject pool was separated into control and experimental groups based on the availability of research assistants and confederates. Students acting as confederates participated in these procedures and completed the questionnaires as did the research participants. Participants were unaware of the confederates' involvement at this point.

The control group remained in the research classroom for the remainder of the experiment. These participants were handed a written scenario. Subjects were instructed to read the scenario and respond to the questions at the bottom of the page, which included an algebraic equation, and an open-ended question about what they would do in this situation. To make the scenario seem more realistic and emphasize the time deadlines, the researcher announced when the participants had two minutes and one minute remaining to complete the exercise. Participants were thanked and excused at the end of the five minutes.

Alternately, some participants were asked to accompany a research assistant to other locations (professor's offices). Two students were taken to each office--one participant and one confederate. The confederates had been trained on procedure and what to say in particular instances that may have arose during the course of the experiment. Participants were initially selected to participate in this experimental group based on their sex in relation to the sex of the confederate(s) available for that particular session. For example, if there were two female confederates in the room, then two female subjects were selected for the experimental group. The same sex protocol was utilized in order to ensure that subjects did not feel apprehensive about being in a small office space with a stranger of the opposite sex. Later in the experiment, however, subjects were selected based on both gender and major. This was done in order to ensure that there was an ample sample of both major/minors and non- majors participating in the experimental section of the exercise.

Once in the office, the research assistant asked the confederate to sit behind the professor's desk and requested that the experimental participant sit at a chair and desk adjacent to the professor's desk. Both confederate and participant were given instructions and a math problem. The research assistant read through the instructions and told the participants that they

had five minutes to complete the math problem. After two minutes had passed, the research assistant opened the door and notified the participants that they had three minutes left, two minutes, and finally one minute. During this five-minute interval, the confederate located a calculator that was strategically placed on the professor's desk and completed the problem in less than two minutes. After completing the math problem, the confederate behaved in such a way (e.g., made loud sighing noises, played with the calculator) to ensure that the other participant knew that the confederate was finished and that a calculator was available in the room. The experimental condition was designed to test if the participant sought out the confederate's assistance or calculator in order to finish the math problem. After the five-minute time period had elapsed, the research assistant entered the professor's office, thanked and debriefed the subject, and identified that the confederate was actually part of the experiment. Once the subject had left the office, the confederate made a report of his or her observations on a standardized form.

Population and Sample

The population for this study was essentially undergraduate students from the population of approximately 270 undergraduate communication majors, and 14,800 undergraduate students at The University of Memphis. Of these populations, 53% of communication majors are female, and 58% of the all students are female.

Of the 200 students participating in the research project, 63.82% reported they were female ($n = 127$), and 36.18% reported they were male ($n = 72$). About one-third of the participants (34.68) % were communication majors or minors ($n = 69$). Of those reporting their year in school, 20 were freshmen, 66 were sophomores, 49 were juniors, and 64 were seniors.

Instrumentation

Communicative Adaptability.

In order to measure communicative adaptability, the study utilized the Communicative Adaptability Scale (Duran, 1983). This questionnaire offers six subscales for capturing an individual's style of communication in social situations. For the present study, four of the subscales and a total of twenty items were taken from the original instrument (social composure, social confirmation, social experience, and appropriate disclosure). These four dimensions tap interactants' repertoire of conversational topics, the discretion to discuss those appropriately, and ability to demonstrate interest in the conversational partner (Duran & Zakahi, 1987). A Likert-type response scale (1, never true of me, to 5, always true of me) was used. Rubin, Palmgreen, and Sypher (1994) report that internal reliability and concurrent validity are satisfactory.

Interaction Involvement.

Interaction involvement (Cegala, 1981) was measured with the original and entire instrument. The instrument's subscales are perceptiveness, attentiveness, and responsiveness. This scale was utilized to gauge how individuals behave and think in an interaction. Participants responded on a Likert-type scale ranging from 1 (not at all like me) to 5 (very much like me).

Math Apprehension.

The final measure of the present study, math apprehension, was used in order to assure that participants' responses to the experimental condition were relative to the interaction, not the math problem presented. The Math Anxiety Scale (Fenema & Sherman, 19xx) is a twelve item survey designed to measure an individual's attitude's towards mathematics. The responses were made on a five item Likert-typed scale ranging from 1 (strongly disagree) to 5 (strongly agree). Descriptive statistics of all measures are shown in Table 1.

Results

The first set of hypotheses predicting higher communication adaptability and interaction involvement for communication majors, seniors, and females were tested with ANOVAs. The model for communication adaptability was not significant, $F(15,183) = 0.49$, $p = .94$. The model for interaction involvement was not significant, $F(15,183) = 0.95$, $p = .51$. Thus main effects were not achieved for either hypothesis 1 or 2.

The second set of hypotheses tested the effect to which the number of communication courses would impact communication adaptability and interaction involvement. These tests were computed on communication majors/minors only as most non-majors had completed only one communication course. These hypotheses were tested with regressions. The model for communication adaptability was not significant, $F(1, 66) = 0.08$, $p = .77$. The model for interaction involvement was not significant, $F(1, 66) = 0.14$, $p = .71$. These nonsignificant findings encouraged the researchers to conduct post hoc analyses to determine if particular courses, rather than the number of courses, could contribute to increased scores on the dependent variables. Four classes (oral communication, introduction to communication, argumentation, and persuasion) were selected as at 30 participants in the study had completed these courses. For both communication adaptability and interaction involvement, ANOVAs revealed no significant findings.

One final post hoc analysis was conducted. A chi-square was used to test for differences between the control and experimental conditions. With an alpha level of .001, there were significant differences between control and experimental groups with regard to asking for help with the math problem or for the calculator, $\chi^2(df = 1) = 15.67$.

Discussion

This study of communication competence in one communication department failed to find differences between communication majors and non-majors on two measures of communication competence. Although majors take more communication coursework, and are presumably more interested in the content, majors' self-perceptions on two different measures of communication competence were not greater than the communication competence self-perceptions of non-majors. Further, for majors, differences were also not realized based on the number of courses taken or for specific courses more likely to emphasize communication performance. Thus, there appears to be no cumulative effect of communication instruction on majors' self-perceptions of communication competence.

The one clear difference found was due to the experimental condition. Students who participated in the control condition (writing what they believed they would do) were far more likely ($n = 74$) to say they would ask for help or the calculator than control group students ($n = 9$). The number of students who did ask for help or for the calculator was too small to compute a reliable chi-square between majors ($n = 3$) and non-majors ($n = 6$). Once again, these results point to the difference in how individuals believe they will communicate in hypothetical situations versus how individuals actually communicate when presented with the interaction situation. This difference is particularly striking when interpreted against the small percentage of students (2.5%) who completed the math problem with the correct answer. We conclude that the situation devised (both hypothetical and experimental) was sufficient enough to create the motivation and opportunity to ask for help. Initially, we hypothesized that communication majors would more frequently ask for help as their training would have provided them with a greater variety of strategies of and enhanced competencies in asking for help.

Why did these tests fail to identify differences between majors and non-majors and/or improvement as the number of courses taken increases? Several reasons can be offered. First, students at the University of Memphis are often first-generation college students, and a good number work full time. Thus, getting a college degree may be more important than doing well in college. Degree completion rather than achievement may be students' primary objective.

Second, the Department of Communication at the University of Memphis allows students to declare themselves as general communication students or as film and video production or broadcast and electronic media students. Thus, students in the production and media tracks are not likely to have many courses emphasizing relational communication issues. Third, within the general communication track, the department has generally taken a cognitive approach to the curriculum. Courses emphasize learning about communication instead of learning how to communicate more effectively. With the exception of the department's basic oral communication course, faculty evaluate student performance through exams, classroom participation, and papers rather than through assignments in which students must demonstrate a specific communication competence or ability. Thus, rather than teaching skill or communication performance and/or application, these courses (Introduction to Human Communication Studies, Argumentation, Persuasion, Oral Communication) are constructed to emphasize conceptual or intellectual knowledge. Some faculty hold the belief that communication competence comes into play once students graduate and are employed. Faculty hope that by providing a conceptual grounding of communication, students as employees will be able to make more informed, more effective intellectual choices about their communication behavior.

Myers and Richmond (1998) counter this position by arguing that it is imperative that students leave their communication programs with the skills and behaviors necessary to be

competitive and successful in careers. They also argue that skill ability is only one part of a communication education. Beyond skills, students need the intellectual ability to analyze, synthesize, and evaluate information as they encounter it. Critical thinking, listening, and speaking skills coupled with an understanding of the communication process and its impact on the social construction of reality "should enable students to make a contribution to society, their families, and themselves" (p. 63).

Finally, limitations arise from how competency was evaluated. As Richmond, McCroskey, and McCroskey (1989) point out, the strong relationship between self-perception of competence and behavioral competence has only been assumed, not confirmed through research. The measures of competency used in this study were not developed from course-specific materials and the communication adaptability scale was not developed specifically as an assessment tool (Hay, 1996). Other studies (Rubin & Graham, 1988) using self-report measures of communication competency have found scores to remain flat over periods of time. This effect occurs, presumably, because of the self-report bias inherent in such predispositional measures. One further limitation is that the measures were not context specific. However, given the study context, students were unaware that their competency was being evaluated. Thus performance or assessment anxieties should have been minimized.

Implications

This study raises several questions about testing for communication competence. First, should we expect majors to be more communication competent? Is a competency approach viable or desirable at the college level? What advantages does a conceptual or intellectual approach have over a competency or skills based approach? How can faculty best integrate theoretical and practical perspective? What effect does faculty desire to have on students?

If faculty want to teach from a communication skills perspective, several recommendations can be offered. First, students can only improve performance if they are provided feedback about their communication (Duran & Zakahi, 1987). While feedback techniques are commonly employed in public speaking courses, such instructional techniques should also be included in other communication courses (e.g., interpersonal, group, persuasion). Duran and Zakahi (1987) provide several examples of feedback techniques beyond the public speaking context.

This type of assessment can only be successful if faculty first identify the complete list of competencies they seek to develop in students (Aitken & Neer, 1992; Redmond, 1998). Competencies must also be evaluated for their relative weight with respect to one another. Finally, faculty must find valid and reliable ways to measure the competencies at multiple points in the students' development as well as after graduation.

The questions raised by this assessment of one program are serious ones. The SCA Task Force on Discipline Advancement (1996) states that the increased demand for communication coursework comes from majors and non-majors alike as well as from employers who insist that employees both understand and be skilled in communication. While Communication Education is full of articles describing the efficacy of specific instructional techniques or strategies, there are few assessments that address the whole of a communication curriculum. Moreover, studies that address instructional effectiveness often fail to discriminate between majors and non-majors.

This discrimination is important. Without such knowledge, we are uncertain if the content or process of the communication classroom makes a difference. Given the ubiquitous nature of communication (see Rubin & Graham, 1988), college students may be increasing their communication competence through daily interaction activities that are common across

disciplines (e.g., classroom discussions) and those that occur frequently in daily interaction activities (e.g., conversations with friends, family, and co-workers). Current assessments have not made it clear that it is the communication classroom that is making a difference.

Should communication majors be better at communicating than non-majors? We believe the answer is yes. It appears the discipline is committed to improving the communication skills of students (particularly in public speaking), as evidenced by the hundreds of articles that address this basic communication competency. And, "pedagogy in the field continues to emphasize skills training as the way to increase the quantity and quality of communication behavior" (Richmond, McCroskey, & McCroskey, 1989, p. 35). Why, then, would not we expect that communication competency result from other communication curriculum? To date, we have located few research studies that have addressed this impact. We know that communication instruction benefits students in general, but we are uncertain how communication instruction benefits communication majors in specific.

References

- Aitken, J. E., & Neer, M. (1992). A faculty program of assessment for a college level competency-based communication core curriculum. Communication Education, 41, 270-285.
- Bendtschneider, L. B., & Trank, D. M. (1990). Evaluating the basic course: Using research to meet the communication needs of the students. In L. W. Hugenberg (Ed., Basic communication course annual (Vol. 2, pp. 196-191). Boston, MA: Academic Library.
- Cegala, D. J. (1981). Interaction involvement: A cognitive dimension of communicative competence. Communication Education, 30, 109-121.
- Conaway, M. (1982). Listening: Learning tool and retention agent. In A. S. Algier & K. W. Algier (Eds.), Improving reading and study skills (pp. 51-63). San Francisco: Jossey-Bass.
- Duran, R. L. (1983). Communicative adaptability: A measure of social communicative competence. Communication Quarterly, 31, 320-326.
- Duran, R. L., & Zakahi, W. R. (1987). Communication performance and communication satisfaction: What do we teach our students? Communication Education, 36, 13-22.
- Ericson, P. M., & Gardner, J. W. (1992). Two longitudinal studies of communication apprehension and its effects on college students' success. Communication Quarterly, 40, 127-137.
- Fenema, E., & Sherman, J. A. (19xx). Fenema-Sherman mathematics attitude scales: Instruments designed to measure attitude towards the learning of mathematics by females and males.
- Ford, W. S. Z., & Wolvin, A. D. (1992). Evaluation of a basic course in speech communication. In L. W. Hugenberg (Ed.), Basic communication course annual Vol. 4, pp. 35-47). Boston: American Press.

Ford, W. S. Z., & Wolvin, A. D. (1993). The differential impact of a basic communication course on perceived communication competencies in class, work, and social contexts. Communication Education, 42, 215-223.

Hawken, L., Duran, R. L., & Kelly, L. (1991). The relationship of interpersonal communication variables to academic success and persistence in college. Communication Quarterly, 39, 297-308.

Hay, E. A. (1996). Oral communication assessment instruments for higher education. In S. P. Morreale & P. M. Backlund (Eds.), Large scale assessment of oral communication: K-12 and higher education (2nd ed., pp. 45-50). Annandale, VA: Speech Communication Association.

McCroskey, J. C., Booth-Butterfield, S., & Payne, S. K. (1989). The impact of communication apprehension on college student retention and success. Communication Quarterly, 37, 100-107.

McCroskey, J. C., & McCroskey, L. L. (1988). Self-report as an approach to measuring communication competence. Communication Research Reports, 5, 108-113.

McMillan, J. J., & Cheney, G. (1996). The student as consumer: The implications and limitations of a metaphor. Communication Education, 45, 1-15.

Myers, S. A., & Richmond, V. P. (1998). Developing the capstone course in communication: Nine essential questions. Communication Education, 64, 59-64.

Redmond, M. V. (1998). Outcomes assessment and the capstone course in communication. Communication Education, 64, 68-75.

Richmond, V. P., McCroskey, J. C., & McCroskey, L. L. (1989). An investigation of self-perceived communication competence and personality orientations. Communication Research Reports, 6, 28-36.

Rubin, R. B., & Graham, E. E. (1988). Communication correlates of college success: An exploratory investigation. Communication Education, 27, 14-27.

Rubin, R. B., Graham, E. E., & Mignerey, J. T. (1990). A longitudinal study of college students' communication competence. Communication Education, 39, 1-14.

Rubin, R. B., Palmgreen, P., & Sypher, H. E. (Eds.) (1994). Communication research measures: A sourcebook. New York: Guilford Press.

Speech Communication Association Task Force on Discipline Advancement. (1996). Executive Summary: Advancement of the discipline. Annandale, VA: Author.

Spitzberg, B. H., & Cupach, W. R. (1984). Interpersonal communication competence. Beverly Hills: Sage.

Wilmington, S. C. (1989). Oral communication for a career in business. Bulletin of the Association for Business Communication, 52(2), 8-12.

Table 1

Descriptive Statistics

Variable	2	3	Mean	Standard deviation	Alpha
1 Communication Adaptability	.65*	.02	74.44	9.81	.87
2 Interaction Involvement		-0.01	66.35	11.95	.89
3 Math Apprehension			36.19	12.99	.96

* $p < .001$

n = 200